

L•Prize: The Utility Role

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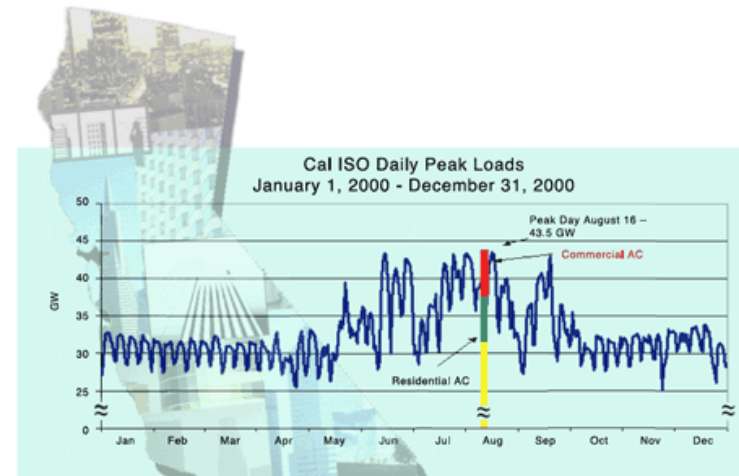
Energy Efficiency & California IOUs

- Increased Energy Efficiency Funding for 2009-11
 - \$3 Billion
- Increased Energy Efficiency Goals
 - Currently at 2.5 Billion kWh per year statewide
 - Increased savings goal will exceed current technological potential



Energy Efficiency & California IOUs

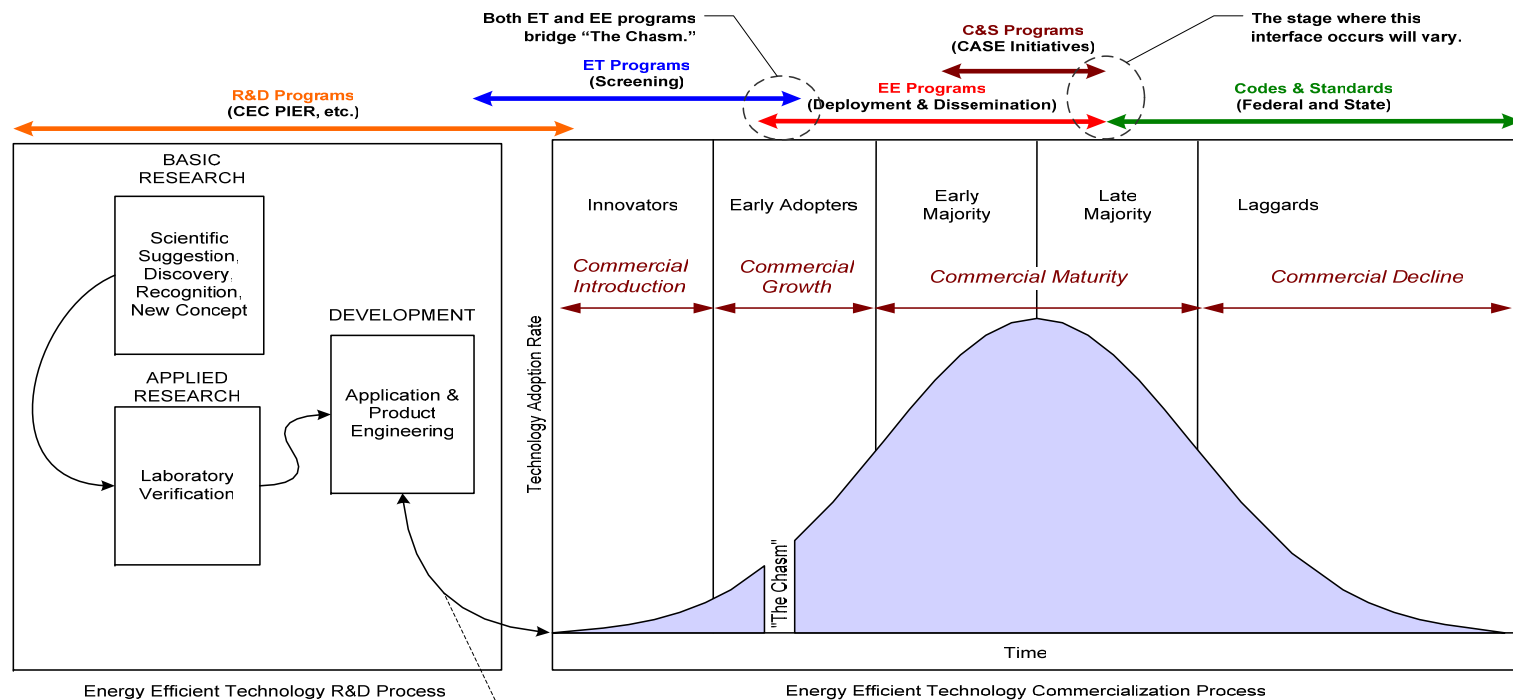
- Energy Action Plan (EAP) – Loading Order
 - Energy Efficiency
 - Demand Response
 - Renewable Energy
- Profits decoupled from kWh sales for all California IOUs
- Cost Recovery
- Shareholder Earnings



Tools for the Challenge: Utility Programs

- Emerging Technologies (ET)—Statewide
 - Accelerate the introduction of energy efficient technologies, new applications, and analytical tools
- Energy Efficiency Programs (EE)—Statewide
 - Provides incentives to accelerate the adoption rate of energy efficient technologies
- Codes and Standards (C&S)—Statewide
 - Codes and Standards Enhancement (CASE) Studies
 - Federal (e.g.: DOE/EPA)
 - State (e.g.: California Title 24)
 - Local Governments (e.g.: Local Ordinances)

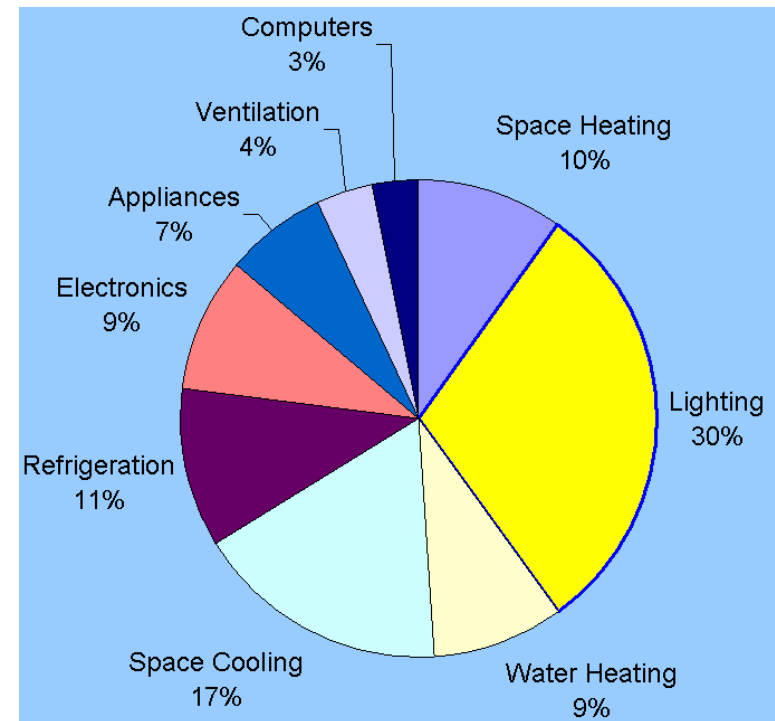
Energy Efficiency Framework



New technologies and applications may cycle between Product Engineering and Commercial Introduction several times until the correct mix of features, performance, price, availability, etc. are reached. Degree of failures and risk are high.

Energy Efficiency Opportunities in Lighting

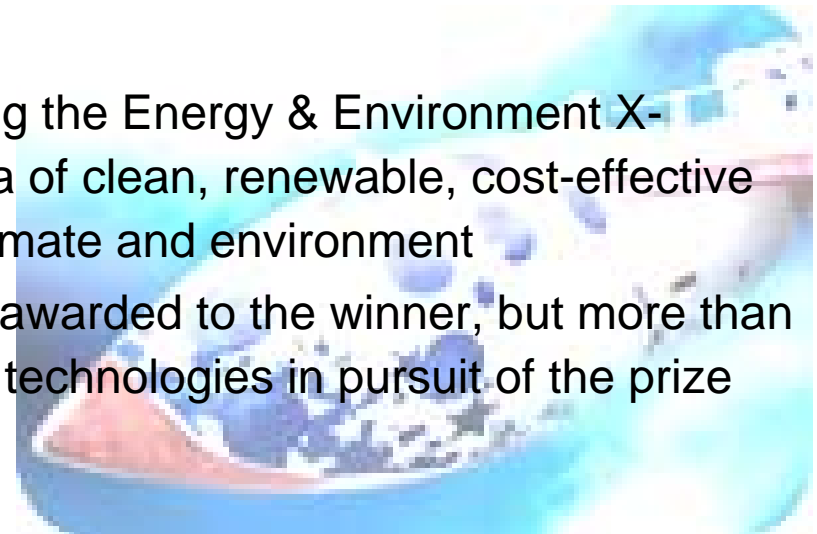
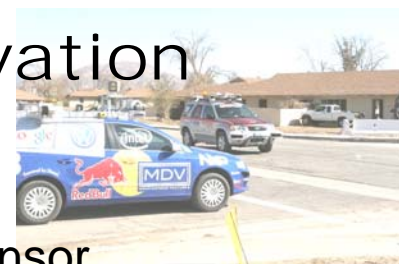
- Energy Impact
 - Total 2,390 TWh: 30% in Lighting (717 TWh)
 - Tremendous Savings Potential
- Energy Efficiency Rebates
 - Over 60% of SCE Incentives go to Lighting



U.S. Building Energy End-Use Breakdown, 2001

Why L•Prize?: Competition Spurs Innovation

- DARPA Grand Challenge
 - Provide “Cash prizes to further DARPA’s mission to sponsor revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their use for national security.”
- X-Prize: to bring about radical breakthroughs for the benefit of humanity
 - X-PRIZE Foundation is developing the Energy & Environment X-PRIZE suite to catalyze a new era of clean, renewable, cost-effective energy with minimal impact on climate and environment
 - Ansari X-PRIZE: \$10 million was awarded to the winner, but more than \$100 million was invested in new technologies in pursuit of the prize (for a SpaceCraft Design)



L•Prize Competition & IOUs' EE Challenges

- Utilities Cannot
 - Meet Future Energy Efficiency Goals with Existing Technologies
 - Directly Support Manufacturer Research & Development (R&D) through Public Goods Charge (PGC) Funds
- Utilities Can
 - Support R&D Through the DOE L•Prize Competition
 - Support the Winning Commercially Available Products Through Utility Incentives, Education, Training and Outreach

L•Prize Competition: Opportunities

- Major Energy Efficiency Opportunity
 - Over 12 Million Customers
- Large Pool of Inefficient Incandescent Lamps
 - 60W Incandescent Lamp
 - Halogen PAR38 Lamp



L•Prize Competition: Opportunities

- Partnership Opportunities
 - All California Investor Owned Utilities (IOU)
 - State and Federal Governments
 - Local Municipalities
- Benefits of Partnerships
 - Access to Larger Markets
 - More Buying Power
 - Larger Volumes Encourage Lower Costs
 - Increased Market Adoption Rate
 - Unified and Stronger Energy Efficiency Message



Palm Desert Energy Partnership



L•Prize Competition: Utility Support

- Memorandum of Understanding (MOU) Signed
 - Pacific Gas & Electric (PG&E)
 - Sacramento Municipal Utility District (SMUD)
 - San Diego Gas & Electric (SDG&E)
 - Southern California Edison (SCE)
 - Nevada Power (new partner)
 - Efficiency Vermont (new partner)
- Agreeing to “work cooperatively to promote high-efficiency solid-state lighting technologies.”

L•Prize Competition: Utility Involvement

L•Prize Planning Stage Involvement

- Participated in Planning Calls
- Attended Planning Meetings
- Provided Technical and Program Support, such as “Technical Input for Product Specifications” and “Program Details for Energy Efficiency Programs”

L•Prize Competition: Utility Involvement

L•Prize Competition Winner Support

- Field Assessment of Winning Products
 - Accelerate Technology Introduction
 - Reduce Market Barriers
 - Increase Awareness
- Utility Incentives to Support Winning Product
 - Accelerate Technology Adoption Rate
 - Reduce Winning Product Costs